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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/512,360	02/24/2000	Hideshi Kawasaki	35.C14272	4685

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EXAMINER

RAMSEY, KENNETH J

ART UNIT PAPER NUMBER

2879

DATE MAILED: 09/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/512,360

Applicant(s)

KAWASAKI, HIDESHI

Examiner

Kenneth J. Ramsey

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

### Prior Art Rejections

- 1) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 2) Claims 1 to 13 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Suzuki et al EP 726,591 in view of Fujii et al EP 954,005. Suzuki et al EP 726,591 discloses the steps of fabricating an electron source composed of plural electron emission devices connected in a matrix by plural row wirings and plural column wirings, comprising forming a matrix of emitter device pre-elements, dividing the matrix of pre-elements into plural groups and sequentially applying an activation voltage to each group to generate a carbon deposit in a gap portion of each pre-element. Suzuki et al differs in that it is not disclosed to sub-divide each group into subgroups and to simultaneously apply activation voltage to at least one pre-element of each subgroup as a unit. Fujii et al teaches simultaneously applying voltage to the pre-elements of an emitter matrix by groupings spread evenly in the matrix to avoid unduly heating a localized area of the device while shortening the process time. While Fujii et al does not speak of sub-groupings, the manner of spreading apart the wirings corresponds to "subgroupings". For instance, in one example of Fujii et al, the wirings 1, 17, 33 ... etc. are selected as the first unit of wirings to be simultaneously treated and the wirings 5, 21, 37 ... etc. are selected as the second unit of wirings. The above arrangement corresponds to the method of grouping the

Art Unit: 2879

wirings by rows with group comprising a block of 256 rows, each sub-group, comprising a block of 16 rows, each row comprising a unit and selecting a "i"th unit of each subgroup to be simultaneously activated in succession generally by steps of 4. It would have been obvious to one of ordinary skill in the art to subdivide the groups of Suzuki et al as in Fujii and to apply the voltage simultaneously to the "i" unit of each sub-group in order to avoid excess heating of a given area of the substrate as taught by Fujii et al. As to claim 2, the deposit in the gaps of the emitters comprises carbon. See Suzuki, column 7, lines 1-9. As to claim 3 the units of Suzuki consists of a row or column as claimed, see Suzuki, column 26, lines 16-26. As to claims 4-8, the groups and subgroups are as above stated and the pitch between each row wiring of a unit corresponds to the number of rows in each subgroup. See Fujii, column 13, lines 13-25. As to claim 9-12, no difference is seen between the image device of Suzuki et al wherein the activation voltage is applied to spaced apart rows as a unit to shorten process time as taught by Fujii than the image device or electron source defined by any of these claims. As to claim 13, the device of Suzuki et al is an image forming apparatus for forming an image as stated in the claim.

#### Directions for Responses

Any formal response to this communication should be directed to examiner Kenneth Ramsey, Art Unit 2879, and either faxed to: 703-872-9318; or mailed to: Assistant Commissioner For Patents Washington, D.C. 20231

Technical inquiries concerning this communication should be directed to Kenneth J. Ramsey, (703) 308-2324 (voice), (703) 746-4832 (fax).

Art Unit: 2879

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Kenneth J. Ramsey  
Primary Examiner  
Art Unit 2879

kjr  
September 9, 2002

A handwritten signature in cursive script, appearing to read "Kenneth J. Ramsey".